

**That which is claimed is:**

1. A transgenic mouse whose germ cells and somatic cells contain (i) an inactive mouse inducible nitric oxide synthase gene, and (ii) a transgene encoding the human inducible nitric oxide synthase gene, said transgene including all regulatory elements of the human nitric oxide synthase gene necessary for a human pattern of expression of said transgene in said transgenic mouse.

2. A transgenic mouse according to claim 1, wherein said mouse contains one allele encoding the human inducible nitric oxide synthase gene.

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3. A method of determining if a compound is capable of inducing Alzheimer's disease, comprising administering said compound to a mouse of claim 1, and then examining said mouse for one the development of said disease.

15 4. A method of determining if a compound is capable of inducing Multiple Sclerosis, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the development of said disease.

20 5. A method of determining if a compound is capable of inducing Inflammatory Bowel Disease, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the development of said disease.

25 6. A method of determining if a compound is capable of inducing Rheumatoid arthritis, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the development of said disease.

7. A method of screening a compound for activity in treating Alzheimer's disease, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the treatment of said disease.

5        8. A method of screening a compound for activity in treating Multiple Sclerosis, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the treatment of said disease.

9. A method of screening a compound for activity in treating Inflammatory  
10    Bowel Disease, comprising administering said compound to a mouse of claim 1, and then examining said mouse for the treatment of said disease.

10. A method of screening a compound for activity in treating Rheumatoid  
arthritis, comprising administering said compound to a mouse of claim 1, and then  
15    examining said mouse for the treatment of said disease.